



US005917431A

United States Patent [19]

Sanada et al.

[11] Patent Number: 5,917,431
[45] Date of Patent: Jun. 29, 1999

[54] **DISPLAY SYSTEM FOR A TRAFFIC SIGNAL
AND A TRAFFIC SIGNAL**

[75] Inventors: Tomohiro Sanada, Mitaka; Terumasa Iba, Tokyo, both of Japan

[73] Assignees: Tokyo Seimitsu Co., Ltd.; OHI Co., Ltd., both of Tokyo, Japan

[21] Appl. No.: 08/876,238

[22] Filed: Jun. 16, 1997

Related U.S. Application Data

[63] Continuation-in-part of application No. 08/536,753, Sep. 29, 1995, abandoned.

[30] Foreign Application Priority Data

Sep. 12, 1995 [JP] Japan 7-234257

[51] Int. Cl.⁶ G08G 1/095

[52] U.S. Cl. 340/907; 340/905

[58] Field of Search 340/907, 908,
340/928, 944, 905, 925

[56] References Cited

U.S. PATENT DOCUMENTS

5,136,287 8/1992 Borenstein 340/925

FOREIGN PATENT DOCUMENTS

2 272 318 5/1994 United Kingdom .
WO 91/16698 10/1991 WIPO .
WO 96/36032 11/1996 WIPO .

Primary Examiner—Brent A. Swarthout

Attorney, Agent, or Firm—Sixbey, Friedman, Leedom & Ferguson; David S. Safran

[57] ABSTRACT

The TS panel can be easily observed with the traffic signal. Multiple pieces of information are changed over to be displayed on the TS panel, and a luminescent color of the information such as traffic condition reports, traffic slogans, advertisements, etc. or a luminescent color of the background of the information is illuminated in the same color as that of a the turned-on light of the signal. A detector detects whether each lamp is turned on or not without modifying an electric circuit of the signal. Then, multiple pieces of information are sequentially changed over in synchronism with a changeover of a turned-on color of the signal in accordance with a detection signal output from the detector, and the luminescent color of the background is changed over to be of a color which is the same color as that of the light currently turned on. As a result, various information can be displayed on the TS panel, and a signal color can be recognized not only by a signal lamp but also a display color of the TS panel.

8 Claims, 8 Drawing Sheets

